

Testometric™

Video Extensometer



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Video Extensometer

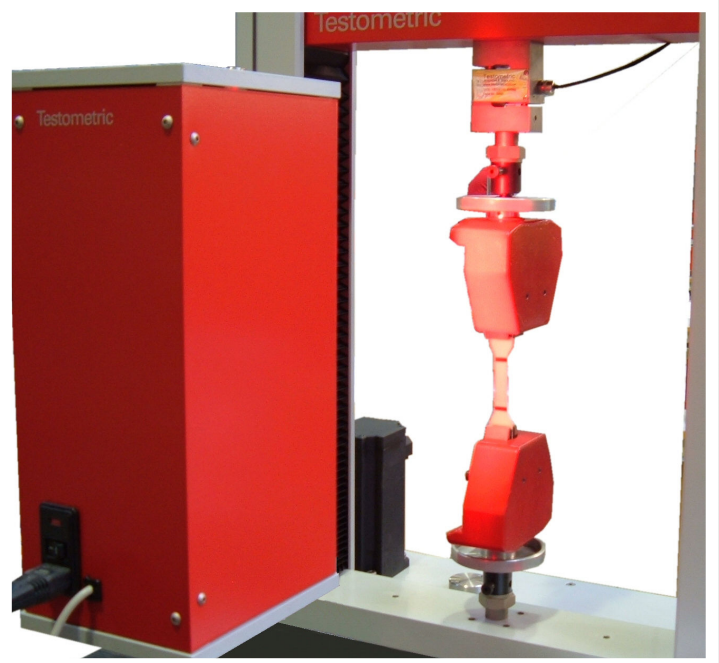
Time	Force (N)	Elongation (mm)	Strain (%)
0.00	0.00	0.00	0.00
0.10	100.00	0.50	0.50
0.20	200.00	1.00	1.00
0.30	300.00	1.50	1.50
0.40	400.00	2.00	2.00
0.50	500.00	2.50	2.50
0.60	600.00	3.00	3.00
0.70	700.00	3.50	3.50
0.80	800.00	4.00	4.00
0.90	750.00	4.50	4.50
1.00	700.00	5.00	5.00
1.10	650.00	5.50	5.50
1.20	600.00	6.00	6.00
1.30	550.00	6.50	6.50
1.40	500.00	7.00	7.00
1.50	450.00	7.50	7.50
1.60	400.00	8.00	8.00
1.70	350.00	8.50	8.50
1.80	300.00	9.00	9.00
1.90	250.00	9.50	9.50
2.00	200.00	10.00	10.00
2.10	150.00	10.50	10.50
2.20	100.00	11.00	11.00
2.30	50.00	11.50	11.50
2.40	0.00	12.00	12.00

Overview

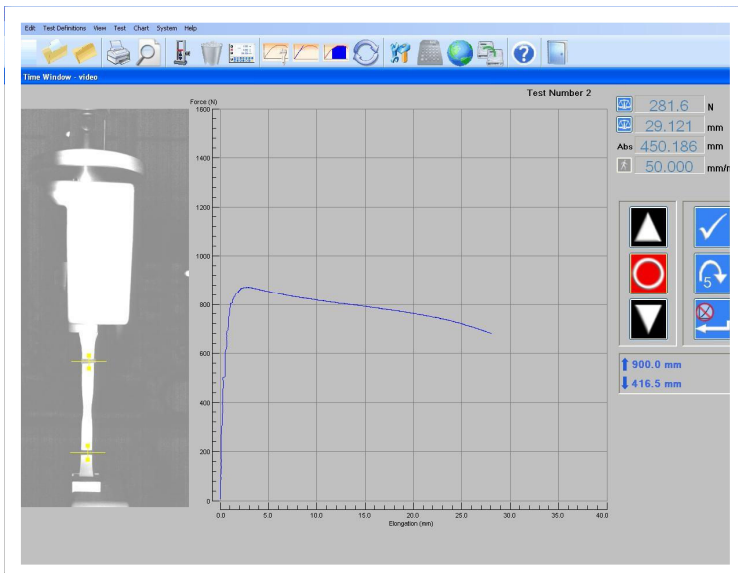
Testometric video extensometers are the ultimate in non-contact strain and elongation measurement. They have many superior features that simplify operation and provide high accuracy measurement without complex set up procedures.

The extensometers operate by precise tracking of specimen gauge marks using a high specification video camera. The data is analysed by advanced image processing software to produce high resolution strain and elongation measurement. High intensity lighting and special filter systems are incorporated to eliminate the effect of any ambient light.

The unique technologies incorporated give huge advantages over traditional clip on extensometers and indeed all other types of non-contact extensometers. They need no special specimen marking, no special positioning, they have totally reliable tracking, they are self calibrating and they have no adverse effect on the specimen, etc.

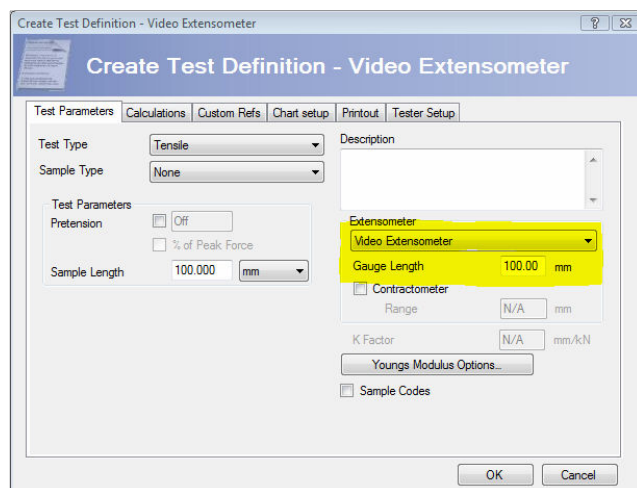
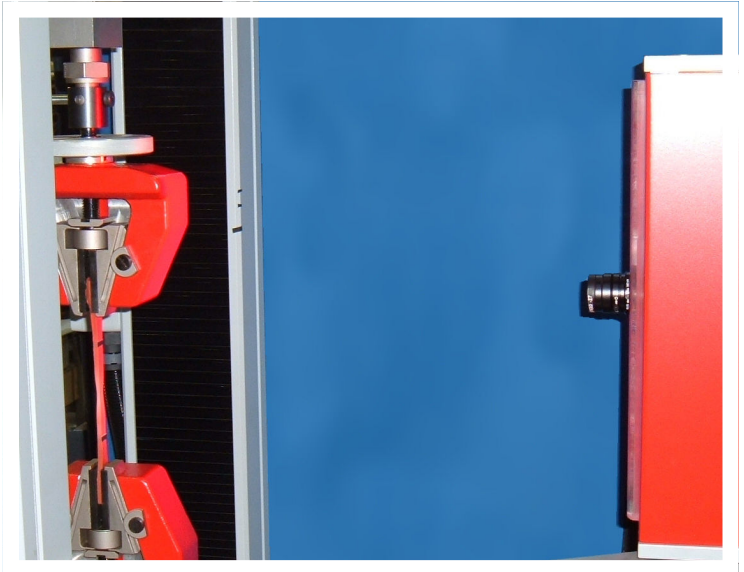


The extensometers are fully integrated with WinTest software which incorporates an automated set up procedure and selection for the video extensometer. It includes auto location of the specimen gauge marks and a visual display of the specimen under test, shown alongside the real time plot of the test curve. All relevant calculations involving true strain and elongation are included.



Features

- Precision non-contact measurement of strain and elongation.
- Advanced tracking system ensures no loss of gauge mark following during test.
- The unique technology employed ensures that the extensometer can never go out of calibration.
- Extremely simple marking of the sample using a wide range of materials with no set width of mark.
- Auto correction of gauge length errors.
- Exact gauge length marking not required.
- No adverse effect of contacting knife edges.
- No adverse effects due to clamping force and drag.
- No moving parts meaning no wear, effects of inertia or damage due to high energy breaks.
- No requirement to remove the extensometer before specimen failure.
- No adjustment required for varying thickness of specimen.
- Non-critical positioning of the extensometer in relation to the specimen.
- Integral high intensity lighting array illuminates only the specimen and the elongation area.
- Advanced light filtering systems ensure that there is no loss in performance due to ambient light variations.



- The system gives elongation readings in true strain and elongation units.
- Models available with varying field of view (FOV) to suit many different applications and materials.
- Versions are available to measure transverse strain.
- Operates with temperature chambers without loss of performance.
- Fully integrated with Testometric WinTest software to give real time plots of true elongation and strain with all related calculations.
- Combined image of specimen under test and real time test curve.

Standards

The VE extensometers are suitable for testing to a wide range of standards including:-

ASTM D 636, ASTM D882, ASTM D417, ASTM D4595, ASTM D4885

BS 2782, BS 903, BS EN 566, BS 7141, BS 3254, BS 5053

ISO 527, ISO 604, ISO 37

DIN 53504, DIN 53354

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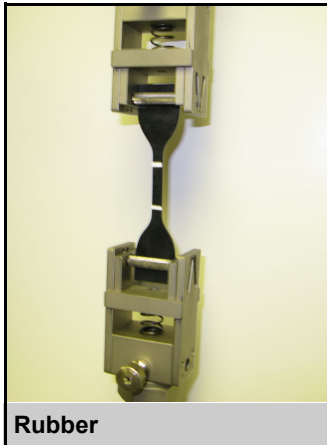


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Materials

Testometric VE Extensometers are suited to a diverse range of materials, many of which are difficult to test using traditional type extensometers.

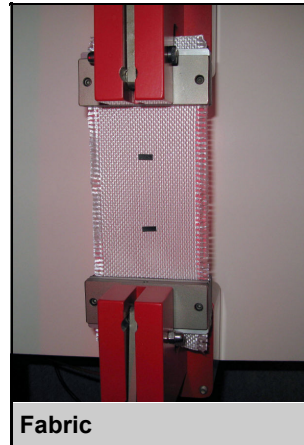
(*Special versions are available for these materials)



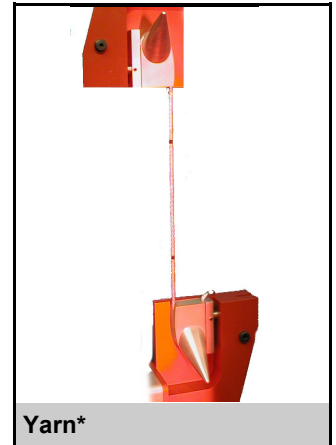
Rubber



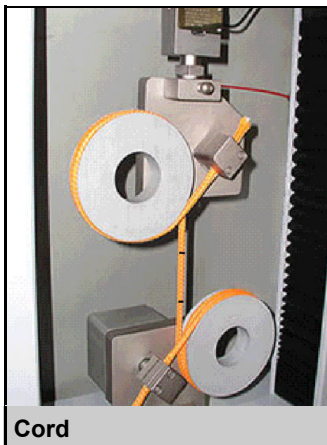
Plastics



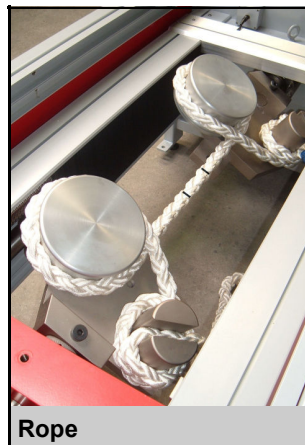
Fabric



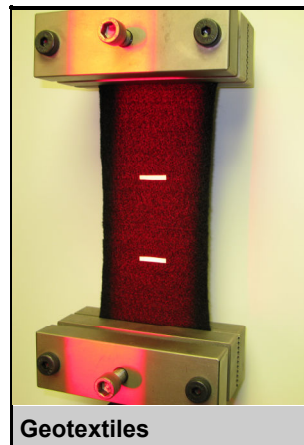
Yarn*



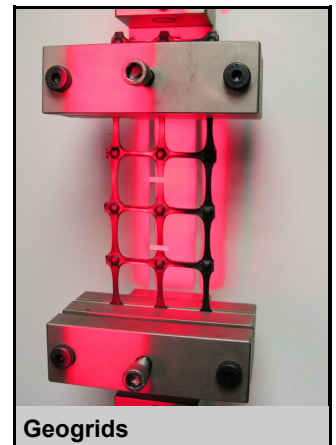
Cord



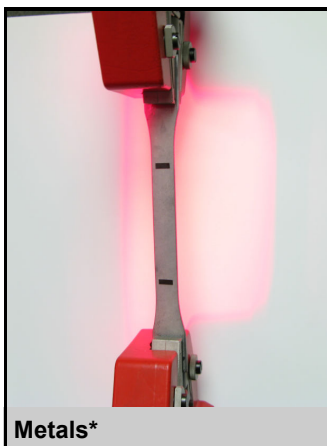
Rope



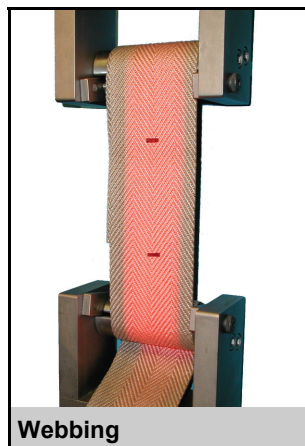
Geotextiles



Geogrids



Metals*



Webbing



Composites



Product Testing

Model	VE100	VE250	VE350	VE500
FOV mm	100	250	350	500
Gauge length mm	10 to 80	10 TO 200	10 TO 300	10 TO 400
Resolution mm	0.002	0.005	0.010	0.020
Accuracy	+/- 0.005 mm or 1%	+/- 0.01mm or 1%	+/- 0.02 mm or 1%	+/- 0.05mm or 1%
Standards	ISO 9513, EN10002-4, ASTM 83, BS EN 10002-4, BS 5214			